IN THE CLAIMS:

1. 1. (Previously amended) A device for attaching to a living subject having a joint,
2. comprising a first sensor, a second sensor, a processor, and a non-volatile storage
3. device, said first sensor for attaching to a first body segment above the joint, said
4. second sensor for attaching to a second body segment below the joint, wherein
5. said first sensor and said second sensor each comprise a solid state inclination
6. measuring device for determining inclination with respect to the gravity vector,
7. wherein said ~~inclination~~ inclinations with respect to the gravity vector determined
8. from said first sensor and from said second sensor ~~is~~ are processed in said
9. processor and stored in said non-volatile storage device for distinguishing lying,
10. sitting, and standing positions, wherein said processor and said non-volatile
11. storage device are part of the device for attaching to the living subject.

1. 2. (Canceled)

1. 3. (Previously amended) A device as recited in claim 1, wherein said inclination
2. measuring device comprises a dc accelerometer.

1. 4. (original) A device as recited in claim 1, wherein said inclination measuring
2. device comprises three accelerometers orthogonally mounted.

1. 5. (original) A device as recited in claim 1, wherein said inclination measuring
2. device further comprises a magnetometer.

1. 6. (Previously amended) A device as recited in claim 1, wherein said inclination
2. measuring device comprises a plurality of magnetometers.

1   7.   (Previously amended) A device as recited in claim 6, wherein data from said

2   magnetometers is for providing direction with respect to the earth's magnetic

3   field.

1   8.   (original) A device as recited in claim 1, wherein data from said first sensor is

2   subtracted from data from said second sensor.

1   9.   (original) A device as recited in claim 8, wherein said subtraction is to determine

2   a difference in orientation.

1   10.   (original) A device as recited in claim 8, wherein said first sensor and said second

2   sensor are for measuring range of motion of said second body segment with

3   respect to said first body segment.

1   11.   (Previously amended) A device as recited in claim 10, wherein data from said

2   range of motion measurement is analyzed for change of range of motion over

3   time.

1   12.   (original) A device as recited in claim 11, wherein initial values of said time

2   dependent data are tared out to provide change from said initial values.

1   13.   (Previously amended) A device as recited in claim 1, wherein said non-volatile

2   storage device comprises a solid state device.

1   14.   (Previously amended) A device as recited in claim 13, wherein said non-volatile

2   storage device comprises a non-volatile memory chip.

1   15.   (Previously amended) A device as recited in claim 1, further comprising a

2   feedback mechanism.

1   16.   (Previously amended) A device as recited in claim 15, further comprising a

2   housing, wherein said first sensor, said storage device, said processor, and said

3   feedback mechanism are all within said housing.

1   17.   (original) A device as recited in claim 15, further comprising a housing separate

2   from said first sensor and said second sensor, wherein said feedback mechanism is

3   within said housing.

1   18.   (original) A device as recited in claim 17, wherein said first sensor and said

2   second sensor are wirelessly connected to said housing containing said feedback

3   mechanism.

1   19.   (original) A device as recited in claim 18, wherein said wireless connection is an

2   RF connection.

1   20.   (currently amended) A device as recited in claim 15, wherein <u>said processor is</u>

2   <u>programmed to activate</u> said feedback mechanism ~~is activated~~ if a preset range of

3   motion threshold has been exceeded more than a specified number of times.

1   21.   (currently amended) A device as recited in claim 15, wherein said feedback

2   mechanism <u>includes a vibrator to provide</u> ~~provides~~ vibratory or auditory feedback.

1   22.   (original) A device as recited in claim 15, wherein said feedback mechanism

2   comprises a piezo-electric buzzer or an electromagnetic shaker.

1   23.   (currently amended) A device as recited in claim 15, wherein said feedback

2   mechanism <u>includes a vibratory or audio signal to provide</u> ~~provides~~ feedback to

3   warn of a problem, discourage a movement, support a desired result, or encourage

4   a movement.

1   24.   (currently amended) A device as recited in claim 23, wherein said ~~processor~~ is
2   ~~programmed to provide feedback if the living subject problem comprises~~
3   repeatedly ~~exceeding~~ exceeds a pre-programmed inclination angle.

1   25.   (original) A device as recited in claim 1, wherein said processor comprises a
2   microprocessor, a signal processor, or a personal computer.

1   26.   (Previously amended) A device as recited in claim 1, wherein data from said
2   inclination determination comprises body segment inclination data as a function
3   of time.

1   27.   (Previously amended) A device as recited in claim 1, wherein data from said
2   inclination determination comprises posture data as a function of time.

1   28.   (currently amended) A device as recited in claim 1, further comprising an output
2   to provide ~~wherein~~ data from said inclination determination ~~is used~~ for use to
3   adjust physical therapy.

1   29.   (original) A device as recited in claim 1, wherein said device further comprises a
2   data entry system.

1   30.   (original) A device as recited in claim 29, wherein said data entry system
2   comprises a button.

1   31.   (currently amended) A device as recited in claim 29, wherein said data entry
2   system includes an input unit ~~is~~ for recording the presence of pain.

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1   32.   (original) A device as recited in claim 29, wherein time, date or other data are
2   recorded when said data entry system is used.

1   33.   (Previously amended) A device as recited in claim 1, further comprising a
2   program for displaying data from said inclination determination as a histogram
3   showing number of inclinations at each angle range during a time period.

1   34.   (Previously amended) A device as recited in claim 1, further comprising a
2   program for displaying data from said inclination determination as inclination v.
3   time.

1   35.   (original) A device as recited in claim 1, further comprising a digital filter.

1   36.   (Previously amended) A device as recited in claim 35, wherein said device may be
2   subject to linear accelerations, wherein said digital filter is for reducing effect of
3   said linear accelerations on the data.

1   37.   (original) A device as recited in claim 35, wherein said digital filter comprises a
2   low pass filter or a high pass filter.

1   38.   (Previously amended) A device as recited in claim 1, wherein said inclination
2   measuring device comprises dc accelerometers, wherein said device further
3   comprises a high pass filter, wherein output of said accelerometers that passes
4   through said high pass filter is subsequently integrated and used to compute a
5   resultant velocity which is used to calculate energy used.

1   39.   (currently amended) A device as recited in claim 1, wherein said <u>processor uses</u>
2   <u>inclination data from said first and second sensors</u> ~~device is further~~ for
3   determining body posture in said sitting position.

1 40. (Previously amended) A device comprising a solid state sensor, a processor, a
2   non-volatile storage device, and a feedback mechanism wherein data from said
3   sensor is processed in said processor to provide an output, wherein said output is
4   stored in said non-volatile storage device as a function of time, and wherein
5   multiple points of said time dependent output stored in said non-volatile storage
6   device are processed in said processor, wherein said processor is programmed to
7   direct said feedback mechanism to provide information or instruction in response
8   to said multiple points of time dependent output indicating inactivity, or activity
9   of a joint during an interval of time that is less than a preset level of activity, or a
10   range of motion of a joint during an interval of time that is less than a preset range
11   of motion or vibration during an interval of time that is greater than a preset
12   amount of vibration.

1 41. (Previously amended) A device as recited in claim 40, wherein said sensor
2   comprises an inclination measuring device

1 42. (Canceled)

1 43. (Previously amended) A device as recited in claim 40, wherein said inclination
2   measuring device comprises a dc accelerometer.

1 44. (original) A device as recited in claim 43, wherein said inclination measuring
2   device comprises three accelerometers orthogonally mounted.

1 45. (original) A device as recited in claim 43, wherein said inclination measuring
2   device further comprises a magnetometer.

1　46.　(original) A device as recited in claim 45, wherein said inclination measuring
2　　　device comprises a plurality of magnetometers.

1　47.　(original) A device as recited in claim 45, wherein said magnetometer is for
2　　　providing direction with respect to the earth's magnetic field.

1　48.　(Previously amended) A device as recited in claim 40, further comprising a
2　　　network of solid state sensors.

1　49.　(Previously amended) A device as recited in claim 48, wherein a first solid state
2　　　sensor of said network of solid state sensors is for placing on a first body segment
3　　　and a second solid state sensor of said network of solid state sensors is for placing
4　　　on a second body segment connected to said first body segment.

1　50.　(Previously amended) A device as recited in claim 49, wherein data from said first
2　　　sensor is subtracted from data from said second sensor to provide angle of a joint
3　　　there between.

1　51.　(original) A device as recited in claim 49, wherein said first sensor and said
2　　　second sensor are for measuring range of motion of said second body segment
3　　　with respect to said first body segment.

1　52.　(Previously amended) A device as recited in claim 51, wherein data from said
2　　　range of motion measurement is analyzed for change of range of motion over
3　　　time.

1　53.　(original) A device as recited in claim 51, wherein an initial values of said time
2　　　dependent data is tared out for said first sensor and said second sensor to provide
3　　　change from said initial value.

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1   54.   (original) A device as recited in claim 40, wherein said storage device comprises a
2   solid state device.

1   55.   (original) A device as recited in claim 54, wherein said storage device comprises a
2   non-volatile memory device.

1   56.   (Previously amended) A device as recited in claim 1, wherein said storage device
2   and said processor are within a housing, wherein said storage device and said
3   processor are within the same housing.

1   57.   (original) A device as recited in claim 40, further comprising a housing, wherein
2   said sensor, said storage device, said processor, and said feedback mechanism are
3   all within said housing.

1   58.   (original) A device as recited in claim 40, further comprising a housing separate
2   from said sensor, wherein said feedback mechanism is within said separate
3   housing.

1   59.   (original) A device as recited in claim 58, wherein said sensor is wirelessly
2   connected to said housing containing said feedback mechanism.

1   60.   (original) A device as recited in claim 59, wherein said wireless connection is an
2   RF connection.

1   61.   (currently amended) A device as recited in claim 40, wherein said processor is
2   programmed to activate said feedback mechanism is activated if a preset range of
3   motion threshold has been exceeded more than a specified number of times.

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4   62.   (currently amended) A device as recited in claim 40, wherein said feedback
5   mechanism <u>includes a vibrator to provide</u> ~~provides~~ vibratory or auditory feedback.

1   63.   (original) A device as recited in claim 40, wherein said feedback mechanism
2   comprises a piezo-electric buzzer or an electromagnetic shaker.

1   64.   (currently amended) A device as recited in claim 40, wherein said feedback
2   mechanism <u>includes a vibratory or audio signal to provide</u> ~~provides~~ feedback to
3   warn of a problem, discourage a movement, support a desired result, or encourage
4   a movement.

1   65.   (currently amended) A device as recited in claim 64, wherein said <u>processor is</u>
2   <u>programmed to provide feedback if the living subject</u> ~~problem comprises~~
3   repeatedly ~~exceeding~~ <u>exceeds</u> a pre-programmed inclination angle.

1   66.   (original) A device as recited in claim 40, wherein said processor comprises a
2   microprocessor, a signal processor, or a personal computer.

1   67.   (original) A device as recited in claim 40, wherein said output comprises body
2   segment orientation data as a function of time.

1   68.   (original) A device as recited in claim 40, wherein said output comprises posture
2   data as a function of time.

1   69.   (currently amended) <u>an output to provide</u> ~~wherein~~ data from said inclination
2   determination ~~is used~~ <u>for use</u> to adjust physical therapy.

1   70.   (original) A device as recited in claim 40, wherein said device further comprises a
2   data entry system.

3   71.   (original) A device as recited in claim 70, wherein said data entry system

4   comprises a button.

1   72.   (currently amended) A device as recited in claim 70, wherein said data entry

2   system includes an input unit is for recording the presence of pain.

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4   73.   (original) A device as recited in claim 70, wherein time, date or other data are

5   recorded when said data entry system is used.

1   74.   (original) A device as recited in claim 40, wherein said output is displayed as a

2   histogram showing number of inclinations at each angle range during a time

3   period.

1   75.   (original) A device as recited in claim 40, wherein said output is displayed as

2   inclination v. time.

1   76.   (original) A device as recited in claim 40, further comprising a digital filter.

1   77.   (original) A device as recited in claim 76, wherein said digital filter is for reducing

2   effect of linear accelerations on the data.

1   78.   (original) A device as recited in claim 76, wherein said digital filter comprises a

2   low pass filter.

1   79.   (Previously amended) A device as recited in claim 40, wherein said sensor

2   comprises accelerometers, further comprising a high pass filter, wherein output of

3   said accelerometers that passes through said high pass filter is subsequently

4   integrated and used to compute a resultant velocity which is used to calculate

5   energy used.

1   80.   (currently amended) A device as recited in claim 40, wherein said <u>processor uses</u>

2   <u>inclination data from said first and second sensors</u> ~~device is further~~ for

3   determining body posture in said sitting position.

1   81.   (original) A device as recited in claim 40, wherein said device is wearable.

1   82.   (original) A device as recited in claim 40, wherein said device records output over

2   a series of intervals of time.

1   83.   (currently amended) A device for attaching to a living subject, comprising a first

2   sensor, a processor, and a storage device, wherein said first sensor comprises a

3   device for determining a curvature of ~~the spine~~ <u>a spine of the living subject,</u>

4   wherein data from said first sensor is processed in said processor and stored in

5   said storage device, wherein said first sensor, said processor and said storage

6   device are part of the device for attaching to the living subject.

1   84.   (Previously presented) A device as recited in claim 83, wherein said device is

2   capable of detecting various postures based on curvature of the spine.

1   85.   (Previously presented) A device as recited in claim 84, wherein said device is

2   capable of detecting a kyphotic curvature of the spine or a lordotic curvature of

3   the spine.

1   86.   (Previously presented) A device as recited in claim 85, wherein said processor is

2   programmed to measure the time the subject has said kyphotic curvature of the

3   spine and determines whether said time exceeds a preset value, and wherein said

4   processor is further programmed to prompt the subject to move if said time

5   exceeds said preset value.

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87.   (Previously presented) A device as recited in claim 86, further comprising a first inclination measuring device for determining inclination with respect to the gravity vector and a second inclination measuring device for determining inclination with respect to the gravity vector, said first inclination measuring device for attaching to a first body segment above a joint, said second inclination measuring device for attaching to a second body segment below said joint for distinguishing lying, sitting, and standing positions.

88.   (Previously presented) A device as recited in claim 83, further comprising at least one additional sensor for attaching to the subject for distinguishing lying, sitting, and standing positions.

89.   (Previously presented) A device as recited in claim 88, wherein said at least one additional sensor includes a solid state inclination measuring device for determining inclination with respect to the gravity vector.

90.   (Previously presented) A device as recited in claim 89, wherein said at least one additional sensor includes a first inclination measuring device and a second inclination measuring device, said first inclination measuring device for attaching to a first body segment above a joint, said second inclination measuring device for attaching to a second body segment below said joint.

91.   (Previously presented) A device as recited in claim 90, wherein said joint is a hip joint.

92.   (Previously presented) A device as recited in claim 1, wherein said joint is a hip joint.

1   93.   (Previously presented) A device as recited in claim 1, further comprising a sensor

2   for further detecting posture based on curvature of the spine.

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4   94.   (Previously presented) A device as recited in claim 93, wherein said sensor is

5   capable of detecting a kyphotic curvature of the spine.

1   95.   (Previously presented) A device as recited in claim 94, wherein said processor is

2   programmed to measure the time the subject has said kyphotic curvature of the

3   spine and determines whether said time exceeds a preset value, and wherein said

4   processor is further programmed to prompt the subject to move if said time

5   exceeds said preset value.

1   96.   (Previously presented) A device as recited in claim 40, further comprising a

2   sensor for detecting a posture based on curvature of the spine.

1   97.   (Previously presented) A device as recited in claim 96, wherein said sensor is

2   capable of detecting a kyphotic curvature of the spine.

1   98.   (Previously presented) A device as recited in claim 97, wherein said processor is

2   programmed to measure the time the subject has said kyphotic curvature of the

3   spine and determines whether said time exceeds a preset value, and wherein said

4   processor is further programmed to prompt the subject to move if said time

5   exceeds said preset value.

99.   (Previously Amended) A device comprising a first sensor for placing on a first
body segment, a second sensor for placing on a second body segment, a processor,
a storage device, and a feedback mechanism wherein data from said first and said
second sensors is processed in said processor to provide an output, wherein said
output is stored in said storage device as a function of time, and wherein multiple
points of said time dependent output stored in said storage device are processed in
said processor, wherein said processor is programmed to direct said feedback
mechanism to provide information or instruction in response to said multiple
points of time dependent output.

100.   (Previously presented) A device as recited in claim 99, wherein said wherein said
processor is programmed to direct said feedback mechanism to provide
information or instruction in response to said multiple points of time dependent
output indicating inactivity, or activity of a joint during an interval of time that is
less than a preset level of activity, or a range of motion of a joint during an
interval of time that is less than a preset range of motion or vibration during an
interval of time that is greater than a preset amount of vibration.

101.   (Previously presented) A device as recited in claim 99, wherein said sensors are
for determining posture, wherein said processor is programmed to provide
feedback based on time duration the subject has been in a posture.

102.   (Previously presented) A device as recited in claim 101, wherein said sensors are
for determining spine curvature, wherein said processor is programmed to provide
feedback based on time duration the subject has maintained a spine curvature.

103.   (Previously presented) A device as recited in claim 101, further comprising a
mechanism for determining whether said time duration exceeds a preset value.

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1   104.   (Previously presented) A device as recited in claim 101, wherein said feedback
2   mechanism includes an indicator for prompting the subject to move if said time
3   duration exceeds said preset value.

1   105.   (currently amended) A device as recited in claim 1, wherein said <u>processor uses</u>
2   <u>inclination data from said first and second sensors</u> ~~solid state inclination~~
3   ~~measuring devices are further~~ for distinguishing bending in one said position.

1   106.   (currently amended) A device as recited in claim 1, wherein said <u>processor uses</u>
2   <u>inclination data from said first and second sensors</u> ~~solid state inclination~~
3   ~~measuring devices are~~ for distinguishing forward bending, backward bending, or
4   lateral bending.